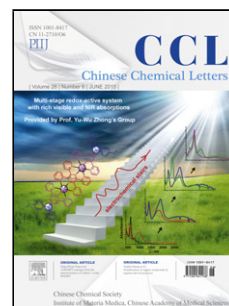


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Communication

# Synthesis, nematocidal activity and docking study of novel chromone derivatives containing substituted pyrazole

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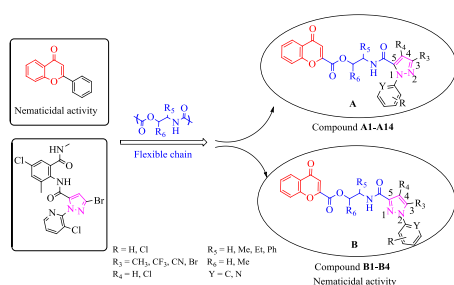
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## Graphical Abstract

Synthesis, nematocidal activity and docking study of novel chromone derivatives containing substituted pyrazole

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A series of chromone derivatives containing substituted pyrazole were designed and synthesized. Preliminary bioassays showed that most of the synthesized compounds exhibited good nematocidal activity *in vivo* against *Meloidogyne incognita* at 10 mg/L.

## ABSTRACT

A series of chromone derivatives containing substituted pyrazole were designed and synthesized. Preliminary bioassays showed that most of the synthesized compounds exhibited good nematocidal activity *in vivo* against *Meloidogyne incognita* at 10 mg/L. Among the tested compounds, **A10** and **A11** exhibited 100% inhibition rates. In addition, the molecular docking results indicated that both compound **A10** and **A11** interacts with amino acid residue Tyr121, Trp279, Tyr70, Trp84 and Phe330 of AChE *via* hydrogen bond and  $\pi$ - $\pi$  stacking. This investigation suggested that the chromone containing substituted pyrazole scaffold could be further optimized to explore novel, high-bioactivity nematocidal leads

## Keywords

Chromone  
Substituted pyrazole

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